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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/624,765

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Walid M. Ahmed

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HARNESSE, DICKEY & PIERCE, P.L.C.

P.O. BOX 8910

RESTON, VA 20195

EXAMINER

RYMAN, DANIEL J

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 03/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/624,765

X

Applicant(s)

AHMED ET AL.

Examiner

Daniel J. Ryman

Art Unit

2665

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 11/12/2004 have been fully considered but they are not persuasive. On page 7 of the Response, Applicant argues that Chheda "uses differences in pilot signal strength to set a threshold." Therefore, "Chheda neither discloses nor suggests 'applying a rules set to the soft handoff information to determine changes in the active list, the rules set requiring more stringent conditions be met to add a base station to the active list when the active list includes a first number of base stations as compared to when the active list includes a second number of base stations, the first number being greater than the second number.'" Examiner, respectfully, disagrees with Applicant's argument.

2. Chheda teaches comparing differences in pilot signal strength to a threshold to determine if a pilot signal should be added to the active set (col. 2, lines 39-48; col. 4, lines 4-7; col. 14, line 3-col. 15, line 7; and col. 15, lines 43-47). This threshold is varied depending on the number of signals in the active set (col. 15, lines 8-61). Thus, Chheda discloses applying a rules set to the soft handoff information to determine changes in the active list (set Z), the rules set requiring more stringent conditions be met (more stringent threshold, $D3 = 5 \text{ dB}$ and $D4, D5, \text{ and } D6 = 2 \text{ dB}$, as opposed to less stringent threshold, $D2 = 100 \text{ dB}$) to add a base station to the active list when the active list includes a first number of base stations ($Nz \geq 3$) as compared to when the active list includes a second number of base stations ($Nz \leq 2$), the first number being greater than the second number.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1-4, 12, and 13 are rejected under 35 U.S.C. 102(a) as being anticipated by Chheda et al (USPN 6,038,448).

5. Regarding claim 1, Chheda discloses a method of processing soft handoff information at a base station, comprising: receiving, at the base station, soft handoff information of a mobile station, the soft handoff information indicating at least a number of base stations in an active list of the mobile station, the active list being a list of base stations involved in a call of the mobile station (Fig. 9-11; col. 2, lines 39-48; col. 4, lines 4-7; col. 14, line 3-col. 15, line 7; and col. 15, lines 8-61); applying a rules set to the soft handoff information to determine changes in the active list, the rules set requiring more stringent conditions be met to add a base station to the active list when the active list includes a first number of base stations as compared to when the active list includes a second number of base stations, the first number being greater than the second number; and sending determination results to the mobile station (col. 15, line 8-col. 16, line 49, esp. col. 15, lines 39-44 and col. 15, lines 52-61) where D2 is less stringent than D3 and D3 is less stringent than D3, D5, and D6.

6. Regarding claim 2, Chheda discloses that the applying step applies the rules set to base stations in a potentials list (candidate set), the potentials list being a list of base stations which

Art Unit: 2665

are potential base stations for the active list (col. 7, lines 6-63 and col. 14, line 51-col. 16, line 49).

7. Regarding claim 3, Chheda discloses that the potentials list is the candidate list in IS-95 standards (col. 7, lines 6-63 and col. 14, line 51-col. 16, line 49).

8. Regarding claim 4, Chheda discloses that the applying step moves a potential base station from the potentials list to the active list when the active list contains one base station and the potential base station has a signal strength greater than a first threshold (T-ADD) (col. 6, lines 9-34, esp. col. 6, lines 17-23 and col. 14, line 3-col. 16, line 44) where the signal strength being greater than T-ADD results in the mobile sending a PSMM where the PSMM is used by the base station to allocate signals to the active set.

9. Regarding claim 12, Chheda discloses that the first number is two or more, and the second number is 1 (col. 15, line 8-col. 16, line 49, esp. col. 15, lines 39-44 and col. 15, lines 52-61).

10. Regarding claim 13, Chheda discloses that the first number is three or more, and the second number is 1 (col. 15, line 8-col. 16, line 49, esp. col. 15, lines 39-44 and col. 15, lines 52-61).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2665

12. Claims 5-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chheda et al (USPN 6,038,448).

13. Regarding claim 5, Chheda suggests that the applying step moves a potential base station from the potentials list to the active list when the active list contains two or more base stations and the potential base station has a signal strength greater than a second threshold, the second threshold being greater than the first threshold (T-ADD) (col. 2, lines 8-25; col. 6, lines 9-34, esp. col. 6, lines 17-23; col. 8, lines 30-46; and col. 14, line 3-col. 15, line 61). Cheddha discloses using relative signal strengths rather than absolute signal strengths when having the network determine whether a potential base station should be added to the active set (col. 14, line 3-col. 15, line 61); however, Chedda does recognize that the absolute signal strength, rather than the relative signal strength, could be used to make the determination (col. 8, lines 30-46) where absolute signal strengths are well known in the art (col. 2, lines 8-25). It would have been obvious to one of ordinary skill in the art at the time of the invention to move a potential base station from the potentials list to the active list when the active list contains two or more base stations and the potential base station has a signal strength greater than a second threshold, the second threshold being greater than the first threshold (T-ADD) in order to have additional criterion with which to judge the potential base station.

14. Regarding claim 6, Chheda suggests that the applying step moves a potential base station from the potentials list to the active list when the active list contains three or more base stations, the potential base station has a signal strength greater than the second threshold (absolute signal strength) (col. 2, lines 8-25; col. 6, lines 9-34, esp. col. 6, lines 17-23; col. 8, lines 30-46; and col. 14, line 3-col. 15, line 61), and the signal strength of the potential base station is a third threshold

Art Unit: 2665

greater than a signal strength of a base station in the active list (relative signal strength) (col. 14, lines 27-36).

15. Regarding claim 7, Chheda discloses that the signal strength of the base station in the active list is the weakest signal strength of base stations in the active list (col. 14, lines 27-36) where “each active set connection” includes the weakest connection.

16. Regarding claim 8, Chheda suggests that the applying step moves a potential base station from the potentials list to the active list when the active list contains two base stations, the potential base station has a signal strength greater than the first threshold (T-Add) (col. 2, lines 8-25; col. 6, lines 9-34, esp. col. 6, lines 17-23; col. 8, lines 30-46; and col. 14, line 3-col. 15, line 61), and the signal strength of the potential base station is second threshold greater than a signal strength of a base station in the active list (relative signal strength) (col. 14, lines 27-36).

17. Regarding claim 9, Chheda discloses that the signal strength of the base station in the active list is the weakest signal strength of base stations in the active list (col. 14, lines 27-36) where “each active set connection” includes the weakest connection.

18. Regarding claim 10, Chheda suggests that the applying step moves a potential base station from the potentials list to the active list when the active list contains two or more base stations, the potential base station has a signal strength greater than the first threshold (absolute signal strength) (col. 2, lines 8-25; col. 6, lines 9-34, esp. col. 6, lines 17-23; col. 8, lines 30-46; and col. 14, line 3-col. 15, line 61), and the signal strength of the potential base station is greater than a signal strength of a base station in the active list (relative signal strength) (col. 14, lines 27-36).

Art Unit: 2665

19. Regarding claim 11, Chheda discloses that the signal strength of the base station in the active list is the strongest signal strength of base stations in the active list (col. 14, lines 27-36).

Conclusion

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jung (USPN 6,049,716) see entire document which pertains to soft swapping base stations in a CDMA system. Padovani et al (USPN 6,151,502) see entire document which pertains to soft handoffs in a wireless communication system. Satarasinghe (USPN 6,192,246) see entire document which pertains to adjusting the conditions for handoff in a soft handoff system. Grob et al (USPN 6,360,100) see entire document which pertains to soft handoff in a wireless communication system. Jou et al (USPN 6,546,248) see entire document which pertains to the generation of PSMMs in a soft handoff system. Soliman (USPN 6,055,428) see entire document which pertains to determining an active set in a soft handoff system.

21. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.


Art Unit: 2665

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J. Ryman whose telephone number is (571)272-3152. The examiner can normally be reached on Mon.-Fri. 7:00-4:30 with every other Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571)272-3155. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DJR
Daniel J. Ryman
Examiner
Art Unit 2665


HUY D. VU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600